

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
31 March 2005 (31.03.2005)

PCT

(10) International Publication Number  
**WO 2005/029707 A1**

(51) International Patent Classification<sup>7</sup>: **H03M 1/12**

(21) International Application Number: **PCT/DK2003/000613**

(22) International Filing Date: 22 September 2003 (22.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **TC ELECTRONIC A/S** [DK/DK]; Sindalsvej 34, DK-8240 Risskov (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ARKNÆS-PEDERSEN, Lars** [DK/DK]; Bernstorffsvej 13, DK-8260 Viby J (DK). **PEDERSEN, Kim, Rishøj** [DK/DK]; Skæring Sandager 54, DK-8250 Egå (DK).

(74) Agent: **PATENTGRUPPEN APS**; Arosgaarden, Aaboulevarden 31, DK-8000 Aarhus C (DK).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

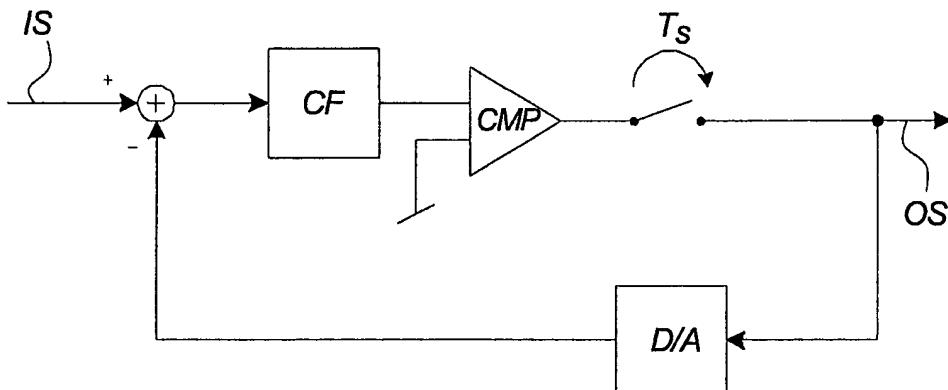
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SELF-OSCILLATING A/D-CONVERTER



**WO 2005/029707 A1**

(57) Abstract: The invention relates to at least one self-oscillating loop (SOL) comprising at least one forward path (FP), at least one feedback path (FBP) wherein said at least one forward path (FP) comprises amplitude quantizing means (AQM) combined with time quantizing means (TQM) and outputting at least one time and amplitude quantized signal (OS). According to the invention, a high-speed high-resolution A/D converter may be obtained.